



# UNITED STATES PATENT AND TRADEMARK OFFICE

*4*  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,982	07/30/2003	Rodolfo A. Martinez	S-100,613	9499
35068	7590	08/25/2006	EXAMINER	
LOS ALAMOS NATIONAL SECURITY, LLC LOS ALAMOS NATIONAL LABORATORY PPO. BOX 1663, LC/IP, MS A187 LOS ALAMOS, NM 87545			VALENROD, YEVGENY	
			ART UNIT	PAPER NUMBER
			1621	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/629,982	<b>Applicant(s)</b> MARTINEZ ET AL.	
	<b>Examiner</b> Yevgeny Valenrod	<b>Art Unit</b> 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Aldrich catalog 1992-1993.

Claims 1-17 are directed to a chiral glycerol labeled with at least one  $^{13}\text{C}$  atom and 0-4 Deuterium carbon-bonded atoms. Aldrich catalog teaches glycerol (page 649, last entry).  $^{13}\text{C}$  and Deuterium are naturally occurring isotopes and are therefore present in the glycerol taught by Aldrich. One can easily calculate the abundance of each of the claimed compounds in the glycerol taught by Aldrich.

For Example: the compound of claim 2 has isotopic Carbons. To calculate the abundance of that compound (R or S) one can use the Table provided by McLafferty (Interpretation of Mass Spectra, W. A. Benjamin, INC., 1966, inside of the rear cover). Two  $^{13}\text{C}$  is  $0.016^2 = .000256\%$  of molecules of glycerol have two  $^{13}\text{C}$ . There are 3 ways that the two labeled carbons can be distributed in glycerol: 1-2, 1-3, and 2-3. Since 1-2 and 2-3 are identical, 2/3 of glycerol having two  $^{13}\text{C}$  will have the labeled

carbons in the correct position.  $2.56 \times 10^{-4}$  multiplied by  $2/3 = 1.707 \times 10^{-4}$ . Taking into account R and S stereoisomers:

$1.707 \times 10^{-4} / 2 = 8.53 \times 10^{-5} \%$  is the % abundance of either isomer of claim 2 in solution of glycerol described by Aldrich.

2. Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Pitlik et al. (*Journal of labeled Compounds and Radiopharmaceuticals*, **1997** VOL XXXIX, No 12, pages 999-1009).

Claim 1 is directed to a chiral glycerol labeled with at least one  $^{13}\text{C}$  atom and 0-4 Deuterium carbon-bonded atoms. Claim 17 is directed to (R) or (S)  $1,2\text{-}^{13}\text{C}_2$  glycerol with one or more deuterium atoms. Pitlik et al. disclose (R) and (S) 1,1 dideuterated  $1,2\text{-}^{13}\text{C}_2$  glycerol (page 1002, Scheme 4, compound 22).

3. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cho et al (*Journal of Organic Chemistry*, **1993**, 58, 7925-7928). Cho et al. disclose  $1\text{-}^{13}\text{C}$  glycerol (Page 7926, column 1, Figure 1, Bottom left).

### **Conclusion**


Claims 1-17 are pending

Claims 1-17 are rejected

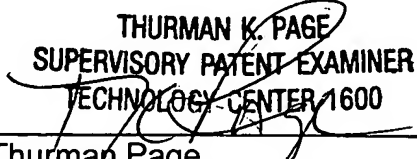
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yevgeny Valenrod whose telephone number is 571-272-9049. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman Page can be reached on 571-272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
\_\_\_\_\_  
Yevgeny Valenrod  
Patent Examiner  
Technology Center 1600

THURMAN K. PAGE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1600

  
\_\_\_\_\_  
Thurman Page  
Supervisory Patent Examiner  
Technology Center 1600